

Patent claims

1. A display device for motor vehicles which for operation in addition to a store of fuel also carry a store of additive which is consumed as a function of the fuel consumption and other driving parameters, having electronically actuatable display elements for indicating the range of the store of additive based on the range of a full fuel tank.

2. The display device as claimed in claim 1, characterized in that there is an electronically actuatable display element for indicating a reserve range of the store of additive based on a reserve range of the store of fuel.

3. The display device as claimed in claim 1 or 2, characterized in that the electronically actuatable display elements are pointers and/or LED display elements.

4. The display device as claimed in one of claims 1 to 3, characterized in that there are two display elements, both of which relate to a common scale, the first display element displaying the range of the store of fuel and the second display element displaying the range of the store of additive based on the range of a full fuel tank.

5. The display device as claimed in claim 4, characterized in that the first display element is realized by a pointer (1), and the second display element is embodied by a plurality of LED display elements (2) which are arranged along the entire scale (3), and it being possible for a sufficient number of LED display elements to be actuated so as to light up in succession -- starting at the origin of the scale -- that the LED display elements which are lit up display the range of the store of additive based on the range of a full fuel tank.

6. The display device as claimed in claim 5, characterized in that the scale (3) is configured in the form of an arc, and the LED display elements arranged along the entire scale are correspondingly curved in form.

7. The display device as claimed in one of claims 4 to 6, characterized in that the second display element is embodied by four LED display elements (2).

8. The display device as claimed in one of claims 4 to 7, characterized in that the LED display elements (2) are embodied in colored form according to a general color designation for the additive.

9. A method for actuating a display device for motor vehicles which for operation in addition to a store of fuel also carry a store of additive which is consumed as a function of the fuel consumption and other driving parameters, having electronically actuatable display elements which indicate the range of the store of additive based on the range of a full fuel tank.

10. The method as claimed in claim 9, characterized in that the range of the store of additive based on the range of a full fuel tank is calculated as the ratio ART of the range of the store of additive AR to the range of a full fuel tank KTR according to

ART = 1, if AR/KTR is greater than 1, and

ART = AR/KTR, otherwise.

11. The method as claimed in claim 9 or 10, characterized in that display elements indicate a value for the store of fuel KV, and the values ART and KV are indicated based on a common scale.

12. The method as claimed in claim 11, characterized in that to indicate the value ART four LED display elements (2) are arranged along the entire scale (3) and the value KV is displayed by a pointer, wherein

- none of these LED display elements are actuated to light up if $ART < 1/4$,
- the first LED element, arranged at the origin of the scale, is actuated to light up if $ART \geq 1/4$,
- the following second LED display element is actuated to light up if $ART \geq 1/2$,
- the following third LED display element is actuated to light up if $ART \geq 3/4$,
- the following fourth LED display element is actuated to light up if $ART = 1$.

13. The method as claimed in one of claims 9 to 12, characterized in that a display element is activated if a reserve range of the store of additive is less than or equal to a reserve range of the store of fuel.